



(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
28.07.1999 Bulletin 1999/30

(51) Int. Cl.⁶: F02M 35/12

(43) Date of publication A2:
16.12.1998 Bulletin 1998/51

(21) Application number: 98110102.5

(22) Date of filing: 03.06.1998

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: 10.06.1997 US 872506

(71) Applicant:
SIEMENS CANADA LIMITED
Mississauga, Ontario L5N 7A6 (CA)

(72) Inventor: McLean, Ian R.
Chatham, Ontario N7M 3V6 (CA)

(74) Representative:
Allen, Derek et al
Siemens Group Services Limited,
Intellectual Property Department,
Siemens House,
Oldbury
Bracknell, Berkshire RG5 8FZ (GB)

(54) Active noise attenuation system

(57) A noise attenuation system for the air induction ducting particularly for an internal combustion engine has an outwardly facing loudspeaker mounted within an air inlet duct so as to lie in the plane of the air intake opening. Signals from an error microphone (and also optionally a detector microphone) are processed in a signal controller, the output driver used to drive the loud-

speaker so that a cancellation sound field is produced, which attenuates the noise emanating from the air intake. The speaker is mounted on a fairing body creating an annular flow passage, a filter element ring inserted in the annular space.

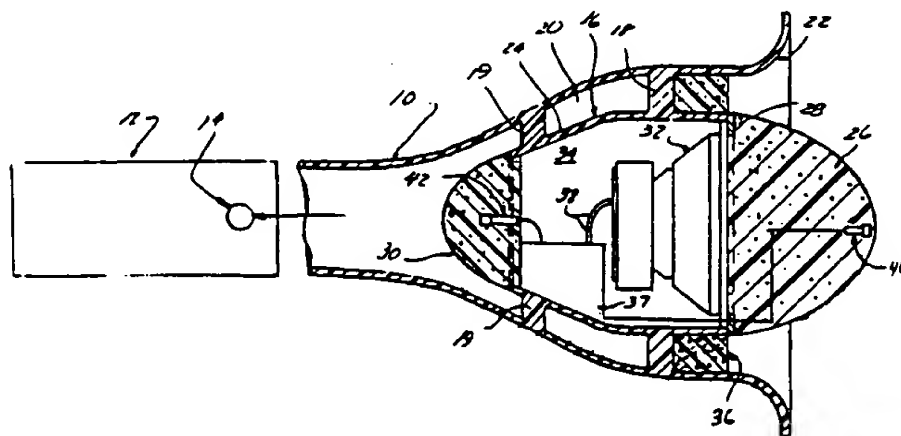


FIG. 1

100



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 11 0102

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
D,X	WO 97 20307 A (SIEMENS ELECTRIC LTD) 5 June 1997 * page 2 *	1-3,10, 11,14	F02M35/12
A	* page 3, line 16 - page 6, line 3; claims 1,2; figures 1,2 *	4	
A	FR 2 740 599 A (TECHNOFIRST) 30 April 1997 * page 1, line 3 - page 2, line 12 * * page 8, line 36 - page 9, line 29 * * page 18, line 38 - page 20, line 22; figures 1,6 *	1-3,5,8, 10,11,13	
A	GB 2 203 488 A (FORD MOTOR CO) 19 October 1988 * abstract; figures 1,2 *	9	
A	US 3 936 606 A (WANKE RONALD L) 3 February 1976 * column 2, line 59 - column 4, line 4; figure 1 *	1,3,7, 10,11,14	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			F02M G10K F01N F02B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 4 June 1999	Examiner Marsano, F
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 98 11 0102

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-06-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9720307 A	05-06-1997	US 5828759 A	27-10-1998
		CN 1207819 A	10-02-1999
		EP 0878001 A	18-11-1998
FR 2740599 A	30-04-1997	AU 7498696 A	22-05-1997
		CA 2233253 A	09-05-1997
		EP 0858651 A	19-08-1998
		WO 9716816 A	09-05-1997
GB 2203488 A	19-10-1988	NONE	
US 3936606 A	03-02-1976	NONE	